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## Australia

### Grain and Feed Update

#### July 2017

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**Report Highlights:**

Post has lowered its estimate for Australian wheat production to 22 million MT for 2017/18, due to expectantly poor seasonal conditions across almost all cropping areas. This is significantly below the record harvest of 35 million MT in 2016/17 and 6.4 percent below the revised official forecast of 23.5 million MT. Post has revised the harvested area for wheat to 12.2 million hectares, 3 percent below the official estimate, due to slow crop development in some regions. Barley production is forecast by Post at 7.5 million MT, 0.5 million MT below the official estimate due to increasingly dry and hot conditions. Post expects sorghum production to rebound to 1.9 million MT due to an increased harvested area and rising prices for alternative crops, such as feed wheat. Post forecasts rice production at 875,000 MT in 2017/18 due to continued water availability and good soil moisture levels. Rice exports are forecast at 0.3 million MT, slightly below the official estimate due to slower monthly exports, with stocks to increase.

**Post:**  
Canberra

**Commodities:**  
Wheat

Barley

Sorghum

Rice, Milled

## **EXECUTIVE SUMMARY**

Australian winter crop production is expected to decline significantly in 2017/18 compared to the previous year due to less favorable seasonal conditions. Record low rainfall in June has impacted crop development. Further, the Bureau of Meteorology's seasonal rainfall outlook for the three months to September 2017 is for drier than average conditions over most cropping regions. While soil moisture was sufficient in most areas for early crop development, timely and sufficient rainfall is now necessary in mid to late winter and spring to achieve average yields. These conditions have already contributed to a fall in harvested area of around 3 percent for wheat and barley. Crop abandonment could rise if needed rainfall does not eventuate in July and August. Yields of both wheat and barley are forecast to decline in 2017/18 due to lower average rainfall and higher average temperatures across most growing areas.

Post has lowered its estimate for Australian wheat production to 22 million MT for 2017/18, due to expectantly poor seasonal conditions across almost all cropping areas. This is significantly below the record harvest of 35 million MT in 2016/17 and 6.4 percent below the revised official forecast of 23.5 million MT due to a smaller harvested area and lower expected yields. Post has revised the harvested area for wheat to 12.2 million hectares, 3 percent below the official estimate. Post has revised wheat export volumes for 2017/18 by 1 million MT due to the expected decline in production for the year. Stocks of the record 2016/17 season are expected to fall and prices for premium and feed wheat have already risen by a third in the 3 months to July 2017 due to increased demand.

Barley production is forecast by Post at 7.5 million MT, 0.5 million MT below the official estimate due to increasingly dry and hot conditions over most cropping areas. Barley exports are expected by Post to fall by 0.5 million MT to 7.5 million MT as a result of lower production, a smaller harvested area and lower expected yields. This is 0.5 million MT, or 6.2 percent, below the official forecast of 6.0 million MT for 2017/18. Significant increases in domestic prices for both malting and feed barley across most regions reflect expectations of a lower crop in 2017/18.

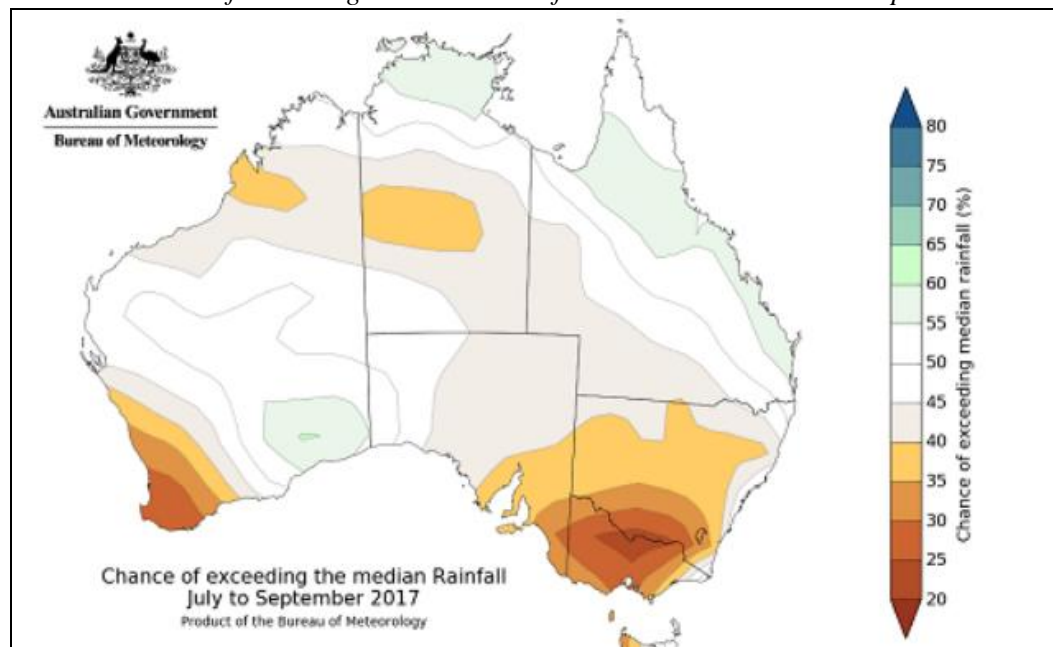
Sorghum production in 2017/18 is forecast by Post to rebound to 1.9 million MT in response to an expanded harvested area and rising prices for alternative feed grains. Post forecasts rice production at 875,000 MT in 2017/18 due to the continued availability of lower cost water in New South Wales (NSW) and the increased harvested area. Post forecasts rice exports at 0.3 million MT in 2017/18.

## SEASONAL OVERVIEW

Seasonal conditions in early 2017 were positive for the planting of winter crops in most states and good rainfall to April increased soil moisture in most cropping areas. However, since then rainfall has been significantly below average. Post now considers that the outlook for 2017/18 is much less favorable for the winter crop compared to the previous year. The combination of warm and dry conditions is likely to limit soil moisture available for crop development during spring 2017. Rainfall forecasts by the Bureau of Meteorology (BOM) for the three months from July to September 2017 are for below average rainfall across most of Australia's winter and summer cropping regions (chart 1). In addition the BOM has forecast above average temperatures for most cropping regions for the three months to September 2017 and the rest of the year (chart 2).

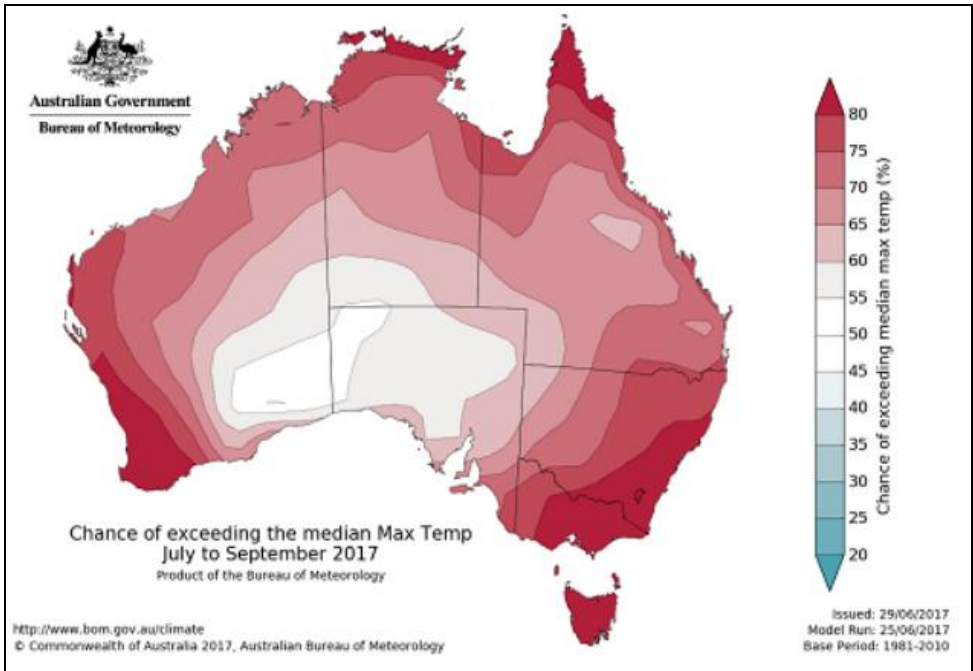
Overall rainfall in April, May and June was 40 percent below average for Australia and the month of June was the second driest on record at 62 percent below average. According to BOM forecasts, the rainfall outlook for July to September 2017 is for below average rainfall over south-western and south-eastern Australia, while average rainfall or below is likely in other cropping regions during this period. This very dry period to June is attributed by the BOM to much higher than average mean sea level pressure (MSLP) across southern Australia, associated with a positive phase of the Southern Annular Mode (SAM).

*Chart 1: Chance of exceeding the median rainfall in the three months to September 2017*



Source: Bureau of Meteorology (2017).

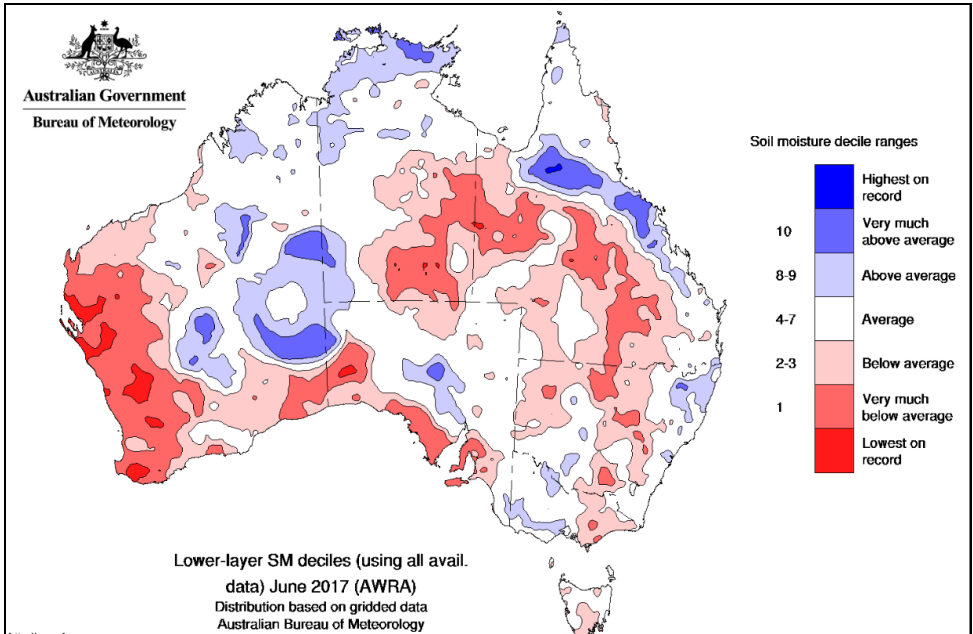
Chart 2: Chance of exceeding the median temperature in the three months to September 2017



Source: Bureau of Meteorology (2017).

As a result of below average rainfall, soil moisture in most cropping regions has also been substandard. By end-June 2017, relative lower layer soil moisture was well below average to extremely low across most of central and western Queensland and adjacent areas of western and southern South Australia as well as parts of Western Australia. Further, lower layer soil moisture is extremely low in Western and South Australia, while in southern NSW very low rainfall and frosts affected crop development (Chart 3).

Chart 3: Australian soil moisture in major cropping areas, end-June 2017



Source: Australian Bureau of Meteorology.

Post notes that in Western Australia the sandy soil structure means well-timed but infrequent rainfall can support crop development but the very dry month of June has impacted on many crop regions which had comparatively low soil moisture levels in mid-2017. Crops that were sown dry now require significant and timely rainfall. While better soils in eastern Australia allow greater water retention, upper layer soil moisture was only average for most cropping regions in NSW, Victoria and Queensland in mid-2017. Soil moisture was below average for much of South Australia and above average in Victoria.

The seasonal outlook for irrigated crops such as rice in south-eastern Australia is positive as water storage levels in the Murray–Darling Basin (MDB) were at 69 percent of total capacity in July 2017 or 15,500 gigaliters (chart 6). While allocation prices for water in the southern Murray-Darling Basin have increased somewhat, there is certainty of supply for most Australian rice producers. This has encouraged an expansion in the harvested area in 2017/18 to 90,000 hectares, up almost 10 percent on the previous year.

## WHEAT

### Production

Post has lowered its estimate for Australian wheat production to 22 million MT for 2017/18, due to expectantly poor seasonal conditions across almost all cropping areas. This is significantly below the record harvest of 35 million MT in 2016/17 and 6.4 percent below the revised official forecast of 23.5 million MT. It is also below the long-term average Australian season for wheat production of 24 million MT. In addition, Post has revised the harvested area for wheat to 12.2 million hectares, 3 percent below the official estimate, due to slow crop development in some regions. Low world wheat prices have encouraged a shift in some regions from wheat to higher value crops such as chickpeas, canola and lentils.

Average wheat yields in 2017/18 are expected by Post to fall to 1.8 MT/hectare as a result of poor seasonal conditions, well below the average yield of 2.7 MT/hectare achieved for 2016/17. Since the planting from April 2017, wheat crops in Western Australia and other states have been significantly affected by poor seasonal conditions and low rainfall. In some regions, around 10 percent of the wheat crop appears unlikely to be harvested as less than 20 percent of normal rainfall occurred by July 2017.

Post notes that part of the wheat crop was sown dry in regions with poor upper layer soil moisture and significant rainfall is especially important over the next few weeks in areas of north-western New South Wales, the Eyre and Yorke peninsulas in South Australia, and the northern and central regions of Western Australia. Rainfall is urgently needed in these regions for crops to establish. Post further notes that some estimates of Australian wheat production in 2017/18 were made on the assumption that June would provide needed rainfall, but instead the month was the second driest ever recorded. This outlook contributed to a one third increase in the price of wheat over the 3 months to July 2017.

While there are no detailed statistics on the amount of wheat carry over from the previous season, it is likely that storage on farms and ports has increased significantly. However, a sharp rise in wheat exports in the first 5 months of 2017 has cleared a significant part of the 2016/17 record crop and increasing wheat prices suggest that stocks may fall over the year. Australia is forecast by Post to have around 6 million MT of wheat in storage in 2017/18 due to the pace of exports in 2017. Most of this grain is reported to be the higher grade ASW1 which was generally achieved for the 2016/17 crop.

Wheat is the major winter crop in Australia, with sowing starting between April and July. Harvesting starts in central Queensland during August and progresses down the east coast to Victoria, finishing during January. On the west coast, the wheat harvest starts during October and is completed during January. The main producing states are Western Australia, NSW, South Australia, Victoria and Queensland. Western Australia usually accounts for over 40 percent of exports, while a greater proportion of the east coast wheat harvest goes to domestic consumption.

### Consumption

Post forecasts wheat total domestic consumption at 7.5 million MT in 2017/18, down from a revised official estimate of 8.0 million MT. This decline reflects lower production due to adverse seasonal conditions. Wheat is Australia's major winter crop and is used mainly in the production of breads, noodles and pastas, while lower grades of wheat are used as stockfeed. Major types of wheat include Prime Hard, Hard, Premium White, Standard, Soft and Durum, based on protein, grain size and moisture content. Wheat consumption in Australia has declined slightly in recent years, due to changes in diets such as a shift to gluten free products by some

consumers. Around 70 kg of flour are consumed in Australia per capita and the domestic market is comparatively mature.

## Trade

Post forecasts Australian wheat exports in 2017/18 at 21 million MT for the calendar trading year and 18 million MT for the marketing year from October 2017. The volume of wheat available for export in 2017/18 is revised downwards due to the expected fall in production. Australian wheat exports were around 60 percent higher in the first 5 months of 2017, compared to the same period in the previous year. However, prices were relatively low with Australian Standard White (ASW) selling for around US\$190/MT free on board over this period.

*Table 1: Australian exports of wheat by country, volume and average value, 2011-2017 ('000 MT)*

Country	2011	2012	2013	2014	2015	2016	2017 (a)
<i>Indonesia</i>							
('000 MT)	3,593	4,594	3,665	4,072	4,153	3,469	2,887
(US\$/MT)	325	299	317	280	250	210	197
<i>China</i>							
('000 MT)	794	2,283	870	1,198	1,378	1,499	990
(US\$/MT)	279	259	314	296	258	219	188
<i>Vietnam</i>							
('000 MT)	2,403	1,994	1,347	1,377	1,306	1,507	991
(US\$/MT)	298	284	326	292	254	220	204
<i>Yemen</i>							
(US\$/MT)	713	859	816	850	1,057	782	581
(US\$/MT)	300	286	318	284	251	215	203
<i>South Korea</i>							
('000 MT)	1,935	2,072	893	1,062	1,054	1,056	499
(US\$/MT)	305	276	246	296	256	245	198
<i>Malaysia</i>							
('000 MT)	952	934	721	1,051	891	873	434
(US\$/MT)	330	298	322	291	245	213	197
<i>Japan</i>							
('000 MT)	1,263	1,369	951	933	882	839	463
(US\$/MT)	379	295	367	308	271	252	231
<i>Philippines</i>							
('000 MT)	1,281	1,675	355	550	673	1,026	1,322
(US\$/MT)	259	267	330	286	254	214	186
<i>India</i>							
('000 MT)	1	4	13	22	438	919	1,659
(US\$/MT)	..	..	..	..	242	220	203
<i>Other</i>	6,798	7,792	8,406	7,161	5,241	4,167	2,300
<i>World</i>							
('000 MT)	19,733	23,576	18,037	18,276	17,073	16,137	12,126
(US\$/MT)	320	288	331	294	259	224	202

*Note:* Calendar years, (a) First five months.

*Source:* Global Trade Atlas

In 2017, low prices for Australian wheat increased competitiveness and access to a number of markets such as the Philippines, India and Iraq, especially in the period before Black Sea harvests were available for the international market. Indonesia traditionally accounts for around 20 percent of total wheat exports. Australian exporters are facing greater import competition in the feed market, as well as in the baking industry. Virtually all of wheat is exported in bulk and less than 5 percent has been reportedly exported by container in recent years.

Table 2: Production, Supply and Demand Estimates: Wheat ('000 HA and '000 MT)

Wheat	2015/2016		2016/2017		2017/2018	
Market Begin Year	Oct 2015		Oct 2016		Oct 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	12,793	12,793	12,852	12,852	12,600	12,200
Beginning Stocks	4,670	4,670	5,639	5,639	8,938	8,938
Production	24,168	24,168	35,109	35,109	23,500	22,000
MY Imports	150	150	150	150	150	150
TY Imports	154	154	150	150	150	150
TY Imp. from U.S.	2	2	0	0	0	0
Total Supply	28,988	28,988	40,898	40,898	32,588	31,088
MY Exports	16,124	16,124	24,000	24,000	19,000	18,000
TY Exports	15,782	15,782	22,000	22,000	22,000	21,000
Feed and Residual	3,800	3,800	4,500	4,500	4,500	4,000
FSI Consumption	3,425	3,425	3,460	3,460	3,500	3,500
Total Consumption	7,225	7,225	7,960	7,960	8,000	7,500
Ending Stocks	5,639	5,639	8,938	8,938	5,588	5,588
Total Distribution	28,988	28,988	40,898	40,898	32,588	31,088
Yield	1.8892	1.8892	2.7318	2.7318	1.8651	1.8033

(1000 HA) ,(1000 MT) ,(MT/HA)

Note: 'New Post' data reflect author's assessments and are not official data.



## BARLEY

### Production

Barley production is forecast by Post at 7.5 million MT, or 0.5 million MT below the official estimate, due to increasingly dry and hot conditions. The harvested area for barley is expected by Post to decline by 3 percent to 3.7 million hectares compared to the official estimate of 3.8 million hectares, as dry sown crops have been affected by the very low rainfall levels in June 2017. In some regions around 10 percent of the barley crop appears unlikely to be harvested as less than 20 percent of normal rainfall had occurred to July 2017. Low domestic and international prices for barley at sowing time also reduced the acreage sown to barley compared to crops such as canola.

Barley is usually sown during May and harvested from November. The crop grows through the winter months in Australia, typically in rotation with wheat, canola, oats and pulses. Western Australia is the major barley producing state with over one third of the harvested area and output. NSW, South Australia and Victoria each account for around one fifth of barley production. One third of barley is usually used in Australia for food and beer production, animal feed and seed. The remainder is exported with around half used as feed barley, one third as malting barley, and the rest as malt for the manufacture of beer or spirits.

### Consumption

Post forecasts domestic consumption of barley at 3.1 million MT in 2017/18, the same as the official estimate. This represents a decline from the level of consumption reached in 2017/18 of 3.3 million MT when record production and low feed barley prices encouraged greater use of this relatively low cost grain in livestock feeding.

The Australian barley industry produces grain for standard and craft beer and distilled spirits production, as well as feed grain for domestic and overseas livestock industries. Demand for malt barley is increasing while prices for feed barley have weakened due to improved pasture growth across Australia and high winter crop production. Around 30 to 40 percent of barley grown in Australia usually achieves malting grade, with the remainder consumed as food and feed barley. Malting barley is used primarily to produce alcohol (beer and distilled spirits such as Shochu, a Japanese distilled spirit) and food including confectionary, snack foods, breakfast cereals, miso and barley tea.

Normally, Australia produces over 2.0 million MT of malting barley. Around 900,000 MT of malt can be produced from 1 million MT of barley. Annual malt exports are around 700,000 MT mainly to Asia. Post estimates that domestic brewing consumption of malt is around 170,000 MT. Australia's per capita beer production fell 14 percent to 92 liters from 108 liters in the six years to mid-2014, although more recent official statistics are unavailable. In mid-2016, the Coopers brewery made a \$A60 million investment to expand malt production to 54,000 MT annually, with about one third to be used at its nearby brewery. The market share of craft beer is estimated at around 5 percent.

### Trade

Post forecasts barley exports at 5.5 million MT in 2017/18, down 0.5 million MT on the official estimate because of an expected decline in production as a result of dry and hot conditions over many cropping areas. Post notes that there are few supplies of barley remaining from the 2016/17 crop especially in Western Australia where strong demand from China has absorbed most available supply. However demand from China is now falling as Black Sea supplies of barley become available. The average monthly barley shipment to China has declined from around 700,000 MT per month in the first quarter of 2017 to only 200,000 in April.

China has been by far the biggest destination for Australian barley exports, ahead of markets such as Saudi Arabia and Japan. Reportedly, malt sales to Chinese brewers has been strong, including a recent 35,000 MT shipment of the new malting variety Compass. Exports of malting grade barley to other countries such as Japan are expected to be stronger over the year with lower supplies from some other countries. The Australian barley industry has sought to strengthen links with buyers in Asia through investment in malting plants in a number of countries. In mid-2017, CBH Group opened a US\$70 million 110,000 MT malt plant in Vietnam to provide barley growers in Western Australia with a stronger link to the Vietnamese beer market, which is the fastest growing in the region.

*Table 3: Australian exports of barley, 2011-2017 by country, volume and average value ('000 MT)*

Country	2011	2012	2013	2014	2015	2016	2017 (a)
China (US\$/MT)	1,268	2,102	1,766	4,377	3,586	3,018	na
Saudi Arabia (US\$/MT)	1,667	1,153	1,702	471	525	249	na
Unidentified	0	0	0	0	446	800	5,223
Japan (US\$/MT)	962	769	967	605	217	924	na
UAE (US\$/MT)	160	350	130	164	118	334	na
Kuwait (US\$/MT)	336	185	175	111	44	349	na
Other	665	552	381	395	252	173	26
World	5,058	5,111	5,121	6,123	5,188	5,847	5,249

*Note:* Calendar year (a) First five months of 2017.

*Source:* Global Trade Atlas

Australia normally accounts for around 20 percent of the global feed barley trade. China has been the largest single market for Australian feed barley exports in recent years, but demand has fluctuated. Post notes that demand for feed barley from China is difficult to predict as livestock producers in that country are now being encouraged to use domestic corn for feed use.

In early 2017, Australian feed barley prices declined to a 15-year low allowing a significant increase in exports to China and South-East Asia although prices have domestic prices have risen by over 20 percent in the 3 months to July 2017, which may constrain the supply available for export for the rest of the year. Exports of feed-grade barley to Saudi Arabia increased significantly in the first quarter of calendar 2017 and a 1.5 million MT feed barley contract was agreed with Saudi Arabia for around A\$180/MT. The competitiveness of Australian feed barley exports into China has increased with implementation of the China-Australia Free Trade Agreement (January 2016) which provided Australia with a competitive advantage due to the removal of the import duty for barley.

Table 4: Production, Supply and Demand Estimates: Barley ('000 HA and '000 MT)

Barley	2015/2016		2016/2017		2017/2018	
Market Begin Year	Nov 2015		Nov 2016		Nov 2017	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	4,105	4,105	4,030	4,000	3,800	3,700
Beginning Stocks	1,120	1,120	669	669	1,773	1,773
Production	8,593	8,593	13,404	13,404	8,000	7,500
MY Imports	0	0	0	0	0	0
TY Imports	0	0	0	0	0	0
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	9,713	9,713	14,073	14,073	9,773	9,273
MY Exports	5,744	5,744	9,000	9,000	6,000	5,500
TY Exports	5,401	5,401	9,000	9,000	6,000	5,500
Feed and Residual	2,000	2,000	2,000	2,000	1,800	1,800
FSI Consumption	1,300	1,300	1,300	1,300	1,300	1,300
Total Consumption	3,300	3,300	3,300	3,300	3,100	3,100
Ending Stocks	669	669	1,773	1,773	673	673
Total Distribution	9,713	9,713	14,073	14,073	9,773	9,273
Yield	2.0933	2.0933	3.3261	3.351	2.1053	2.027

(1000 HA) ,(1000 MT) ,(MT/HA)

Note: 'New Post' data reflect author's assessments and are not official data.

## **SORGHUM**

### **Production**

Post expects sorghum production to rebound to 1.9 million MT due to an increased harvested area and rising prices for alternative crops, such as feed wheat. The area harvested is expected to increase to 630,000 hectares, in line with the official forecast and over 50 percent greater than the previous year. The previous season was difficult for sorghum because of the low prices during the early planting window which discouraged sowing especially in northern NSW. Further, dry seasonal conditions in the 3 months to February 2017 adversely affected production and yield for the 2016/17 harvest.

For the 2017/18 season, sorghum plantings are being influenced by higher prices of almost A\$300 delivered to some ports, while cotton prices have moderated; creating an incentive for sorghum planting as a summer crop. In addition, higher prices for wheat mean that sorghum is priced more competitively as a feed grain for domestic livestock industries, such as the poultry and beef feedlot industries.

The Dalby ethanol plant in Queensland has announced that it is expanding operations because of the new Queensland ethanol mandate. Currently, around 200,000 MT a year of sorghum is used for ethanol production when the Dalby operation is running at full capacity and this amount could increase in the future. The biofuel plant also produces DDG which is sold mainly as a high-protein stockfeed for pigs, dairy cows and lot-fed cattle.

Australia normally produces around two to three percent of global sorghum production and accounts for five percent of global exports. Sorghum is a summer crop mainly used for livestock feed. Around seventy percent of the Australian crop is grown in Queensland, and the remainder in northern NSW. Sorghum is typically grown as a rotation crop as it is relatively drought tolerant and can tolerate more acid soils. Planting times for sorghum are from September to January.

### **Consumption**

Post forecasts domestic consumption of sorghum in 2017/18 at 1.1 million MT, in line with the official estimate. Sorghum has traditionally been used domestically for feed grain for the beef, dairy, pig and poultry industries, and is the main summer grain crop in most regions of Queensland. Sorghum is classified as either grain sorghum or forage sorghum according to the tannin content.

### **Trade**

For 2017/18, Post forecasts sorghum exports of 0.6 million MT for the trade year and 0.8 million MT for the marketing year from March 2018. Export demand for sorghum has varied significantly in recent years. One unknown factor is the extent of Chinese demand for sorghum imports as livestock producers in that country are switching to domestic corn for feed use. Australian sorghum has been uncompetitive into the Chinese feed market, with prices significantly above prices for US origin sorghum. However, Chinese demand for sorghum by the Chinese baijiu spirits industry is expected to be resilient.

Table 5: Australian exports of sorghum by country, volume and average value, 2011-2017 ('000 MT)

Country	2011	2012	2013	2014	2015	2016	2017 (a)
China	0	39	758	349	1,512	752	711
(US\$/MT)	..	248	327	302	272	203	205
Japan	39	1	13	0	0	0	7
(US\$/MT)	292	..	..	..	..	..	..
South Africa	35	90	0	0	0	0	..
(US\$/MT)	279	256	..	..	..	..	..
Taiwan	19	34	13	3	4	19	17
(US\$/MT)							
Other	23	41	13	4	8	23	35
							..
World	116	205	797	356	1,524	794	770
(US\$/MT)	300	257	327	303	273	203	214

Note: Calendar year (a) First five months of 2017.

Source: Global Trade Atlas

Table 6: Production, Supply and Demand Estimates: Sorghum ('000 HA and '000 MT)

Sorghum	2015/2016		2016/2017		2017/2018	
Market Begin Year	Mar 2016		Mar 2017		Mar 2018	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	681	681	416	416	630	630
Beginning Stocks	252	252	280	280	182	182
Production	2,037	2,037	1,107	1,107	1,900	1,900
MY Imports	0	0	0	0	0	0
TY Imports	0	0	0	0	0	0
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	2,289	2,289	1,387	1,387	2,082	2,082
MY Exports	904	904	500	500	800	800
TY Exports	717	717	500	500	600	600
Feed and Residual	1,100	1,100	700	700	1,100	1,100
FSI Consumption	5	5	5	5	5	5
Total Consumption	1,105	1,105	705	705	1,105	1,105
Ending Stocks	280	280	182	182	177	177
Total Distribution	2,289	2,289	1,387	1,387	2,082	2,082
Yield	2.9912	2.9912	2.6611	2.6611	3.0159	3.0159

(1000 HA) ,(1000 MT) ,(MT/HA)

Note: 'New Post' data reflect author's assessments and are not official data.

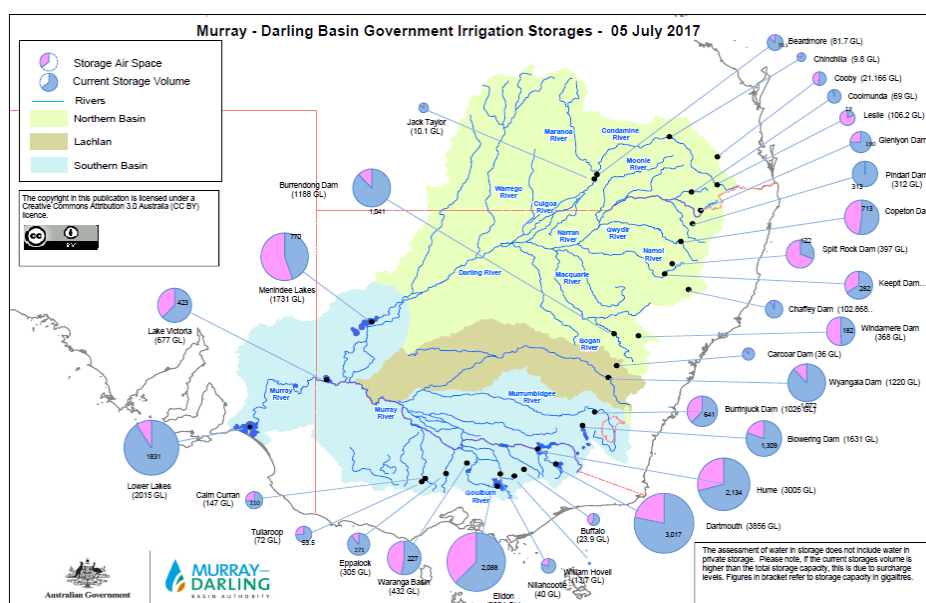
## RICE

### Production

Post forecasts rice production at 875,000 MT in 2017/18, in line with the official forecast. This is due to continued water availability, higher dam levels and good soil moisture levels. The area harvested is forecast by Post to be 90,000 hectares in 2017/18, 10 percent above the area in 2016/17. Australian rice growers have benefitted from a significant increase in the supply of irrigation water at a lower cost, and this situation is expected to continue. The industry has the capacity to produce over 1 million MT of rice and this level of production has been approached in recent years due to lower water prices, more reliable rainfall and higher dam levels (Chart 4).

Currently, the water supply for the NSW rice crop is abundant as most major supply dams (such as the Hume, Burrinjuck, Blowering, Lake Victoria and Dartmouth dams) are around 70 percent of full capacity. As a result, general security water allocations in the Murray and Murrumbidgee Valleys are more reliable, while prices on the temporary market have fallen. These changes have made rice more competitive with alternative crops such as nuts and cotton. Further, rice in the Riverina region of NSW can be sown to the end of November, which is not possible for alternative summer crops such as cotton.

Chart 4: Water storages in the Murray-Darling Basin (NSW, Victoria and Queensland)



Source: MDBA (2017).

Two new shorter season varieties have been trialled by the Australian rice industry. These could change rotations by allowing growers to double crop into rice out of winter cereals. Compared to the longer season varieties, the new shorter season varieties YRM70 and YRK5 could be planted later, offering the opportunity for double or even triple cropping. The short season varieties would allow growers to make better use of late allocations of water but have not yet been scheduled for full commercial release.

The rice industry is mainly based in NSW but hopes to expand into the more water abundant regions in Queensland and northern Australia. Initial rice crops in Queensland have been developed mainly as a summer crop for sugar farmers. The Australian government recently provided A\$4 million in funding to support research

into the viability of a northern Australian rice industry because of the long-term problems with water availability and cost in southern Australia.

## Consumption

Post forecasts that consumption of rice in Australia in 2017/18 will increase slightly to 380,000 MT, as demand for both rice meals and products is slowly expanding. Overall, the Australian population is growing slowly while demand for rice products is relatively mature.

## Trade

Post forecasts rice exports at 0.3 million MT in 2017/18, slightly below the official estimate and notes the trend towards lower monthly exports over 2017. Australia is a significant supplier of Japonica rice into the Middle East market, with a one third share of imports. The sole Australian marketer SunRice is concerned about access to the Papua New Guinea market, which can account for a significant share of Australian rice exports. Post notes that official statistics of rice exports do not have country detail because of confidentiality provisions. Post forecasts imports of other types of rice into the domestic market will be stable at 155,000 MT in 2017/18.

*Table 7: Australian exports of rice, 2011-2016 ('000 MT)*

Country	2011	2012	2013	2014	2015	2016	2017 (a)
World	314	452	466	410	325	168	49
(US\$/MT)	870	786	796	861	920	927	919

*Note:* Calendar years, country detail unavailable because of confidentiality provisions. (a) First five months of 2017.

*Source:* Global Trade Atlas.

*Table 8: Australian imports of rice, 2011-2016 ('000 MT)*

Country	2011	2012	2013	2014	2015	2016	2017 (a)
Thailand	95	68	69	81	73	77	31
(US\$/MT)	969	1082	1082	921	863	765	700
India	16	23	27	30	34	33	17
(US\$/MT)	1384	1289	1382	1514	1206	1068	1111
Pakistan	21	18	19	18	17	21	9
(US\$/MT)	979	1038	974	1228	989	747	756
United States	11	12	13	11	10	10	4
(US\$/MT)	984	909	888	1023	1041	934	835
Other	17	13	14	16	18	22	8
							..
World	160	134	142	156	152	163	69
(US\$/MT)	1024	1103	1106	1094	975	850	837

*Note:* Calendar year (a) First five months of 2017. *Source:* Global Trade Atlas

Table 9: Production, Supply and Demand Estimates: Rice ('000 HA and '000 MT)

Rice, Milled	2015/2016		2016/2017		2017/2018	
Market Begin Year	Mar 2016		Mar 2017		Mar 2018	
Australia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	23	23	82	81	90	90
Beginning Stocks	223	223	70	70	206	206
Milled Production	180	180	601	601	630	630
Rough Production	250	250	835	835	875	875
Milling Rate (.9999)	7200	7200	7200	7200	7200	7200
MY Imports	167	167	155	155	155	155
TY Imports	163	163	155	155	155	155
TY Imp. from U.S.	11	11	0	0	0	10
Total Supply	570	570	826	826	991	991
MY Exports	140	140	250	250	350	350
TY Exports	165	165	200	200	325	325
Consumption and Residual	360	360	370	370	380	380
Ending Stocks	70	70	206	206	261	261
Total Distribution	570	570	826	826	991	991
Yield (Rough)	10.8696	10.8696	10.1829	10.3086	9.7222	9.7222
(1000 HA) ,(1000 MT) ,(MT/HA)						

Note: 'New Post' data reflect author's assessments and are not official data.